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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/583,693 | 05/31/2000 | Marcos N. Novaes | POU9-2000-0096-US1 | 4787 |

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| EXAMINER | |
|---|---|
| WON, YOUNG N | |
| ART UNIT | PAPER NUMBER |
| 2155 | 14 |

DATE MAILED: 03/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 09/583,693 | NOVAES ET AL. | |
| | Examiner | Art Unit | |
| | Young N Won | 2155 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *13 February 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1,2,7,9-30,32-54 and 56-74* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,7,9-30,32-54 and 56-74* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

## DETAILED ACTION

1. Claims 1, 9-21, 28, 32-44, 51, 52, and 56-68 have been amended. Claims 8, 31, and 55 have been cancelled. Claims 1, 2, 7, 9-30, 32-54, and 56-74 have been examined and are pending with this action.

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 1, 2, 7, 9-16, 19-23, 26-30, 32-39, 42-46, 49-54, 56-63, 66-70, 73 and 74 are rejected under 35 U.S.C. 102(e) as being anticipated by Slaughter et al. (US 6014669 A).

As per claims 1, 28, 51, and 52, Slaughter teaches a method (see col.15, line 49), a system (see col.1, line 16), and at least one program storage device readable by a machine tangibly embodying at least one program of instructions executable (see col.5, lines 5-7) by the machine to perform a method of managing cluster configurations of a computing environment (see title), said method, system, and program of instructions comprising: executing a distributed configuration management component on a plurality of nodes of a cluster of said computing environment (see col.2, lines 31-38 and col.4, lines 24-26); and providing configuration consistency of said cluster and cluster membership control (see col.3, lines 63-65 and col.4, lines 37-38) using the distributed configuration management component (see col.2, lines 41-42 and col.4, lines 19-24 & 38-40), wherein said providing configuration consistency comprises performing a comparison between local configuration data and global configuration data (see col.2, lines 39-47 and col.5, lines 24-34 and col.12, lines 27-32), and wherein said providing cluster membership control comprises providing one or more cluster membership control operations associated with said cluster (see col.4, lines 37-40 & 48-53 and col.12, lines 27-32), said one or more cluster membership control operations including a define cluster command used to initially create a cluster (see col.4, lines 29-35; col.6, lines 15-67; and col.8, lines 53-55).

As per claims 2, 29 and 53, Slaughter further teaches wherein said providing comprises comparing data in a local storage with data in a global storage to determine whether a node can join said cluster (see col.4, lines 48-52; col.5, lines 24-27; col.7, lines 32-36; and col.7, line 58 to col.8, line 4).

As per claims 7, 30, and 54, Slaughter further teaches wherein said providing configuration consistency comprises comparing data in a local storage with data in a global storage to determine whether one or more components of said cluster are to be initiated (see col.4, lines 48-52; col.5, lines 24-27; col.7, lines 32-36; and col.7, line 58 to col.8, line 4).

As per claims 9, 32, and 56, Slaughter further teaches wherein said one or more operations comprise an undefined cluster operation used to erase a definition of the cluster (see col.10, lines 37-43 and col.11, line 57 to col.12, line 13).

As per claims 10, 33, and 57, Slaughter further teaches wherein said one or more operations comprise a modify cluster operation used to modify one or more attributes of a definition of the cluster (see col.2, lines 34-50 and 56-60; col.3, lines 59-61; col.4, lines 65-67; and col.6, lines 15-67).

As per claims 11, 34, and 58, Slaughter further teaches wherein said one or more operations comprise at least one of a define node operation used to define a node to the cluster, and an undefined node operation used to erase a definition of a node of the cluster (see col.4, lines 48-52; col.8, lines 4-61; and col.11, line 66 to col.12, line 8).

As per claims 12, 35, and 59, Slaughter further teaches wherein said one or more operations comprise at least one of a define registry server node operation used

to define a particular node in the cluster as a registry server node, and an undefined registry server node operation used to remove a node definition as a registry server node (see claim 9 rejection above). It is inherent that nodes can be any computer network device such as a computer, server, or database (see Slaughter: col.3, lines 51-52).

As per claims 13, 36, and 60, Slaughter further teaches wherein said one or more operations comprise a modify node operation used to change one or more attributes of a definition of a node of the cluster (see col.2, lines 51-56).

As per claims 14-16, 37-39, and 61-63, Slaughter further teaches wherein said one or more operations comprise at least one of an online registry server operation used to initiate a system registry process on a node of the cluster, and an offline registry server operation used to stop a system registry process of a node of the cluster (see col.4, lines 14-33).

As per claims 19, 42, and 66, Slaughter further teaches wherein said one or more operations comprise at least one of a define network operation used to create a network of the cluster, and an undefined network operation used to erase a network definition of the cluster (see claim 9 rejection above; col.4, lines 44-47; and col.10, lines 52-56).

As per claims 20, 43, and 67, Slaughter further teaches wherein said one or more operations comprise a modify network operation used to modify one or more attributes of a network definition (see claim 10 rejection above; col.4, lines 44-47; and col.10, lines 52-56).

As per claims 21, 44, and 68, Slaughter teaches of further comprising commencing execution, via an operating system of the computing environment, the distributed configuration management component (see claim 1 rejection). It is implicit that the execution of a distributed configuration management component would be commenced by a processor running an operating system resident on that computer environment since Slaughter teaches that each node comprises a client, a cluster server, and a configuration database (see col.3, lines 51-52) and updates are maintained in each node (see col.2, lines 34-36).

As per claims 22, 45, and 69, Slaughter teaches of further comprising, maintaining one or more data structures usable in providing configuration consistency (see col.2, lines 31-34).

As per claims 23, 46, and 70, Slaughter further teaches wherein at least one data structure of said one or more data structures is stored in local storage and global storage (see col.1, lines 12-15; col.2, lines 53-56; and col.5, lines 26-27).

As per claims 26, 49, and 73, wherein said one or more data structures comprise at least one node definition data structure for at least one node of said plurality of nodes of said cluster (see col.2, lines 34-36).

As per claims 27, 50, and 74, wherein said one or more data structures comprise a registry server nodes data structure identifying one or more registry server nodes of said cluster (see claim 26 rejection above). It is inherent that nodes can be any computer network device such as a computer, server, or database (see Slaughter: col.3, lines 51-52).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 17, 18, 40, 41, 64, and 65 are rejected under 35 U.S.C. 103(a) as being unpatentable over Slaughter et al. (US 6014669 A) in view of Modiri et al. (US 6192401 B1).

As per claims 17, 18, 40, 41, 64, and 65, Slaughter further teaches wherein said one or more operations comprise at least one of a define operation used to define the cluster, and an undefined operation used to delete the cluster and wherein said one or more operations comprise a modify operation used to modify one or more attributes of a definition (see claim 9 and 10 rejections above). Slaughter does not explicitly teach of a sub network. Modiri teaches of a sub network (see col.2, lines 22-25 & 46-59). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to employ the teachings of Modiri within the system of Slaughter by implementing a sub network within the cluster configuration management method, system, and program because Modiri teaches that this results in "the cluster reconfiguring with an optimized configuration" (see Modiri: col.2, lines 60-62), and Slaughter teaches that he

"desires" what is high availability, minimal interrupts, and "fast and efficient queries" (see Slaughter: col.2, lines 19-25).

4. Claims 24, 25, 47, 48, 71, and 72 are rejected under 35 U.S.C. 103(a) as being unpatentable over Slaughter et al. (US 6014669 A) in view of Zhang et al. (US 5832182 A).

As per claims 24, 47, and 71, Slaughter does not teach wherein said one or more data structures comprise a cluster data structure associated with said cluster. Zhang teaches of a cluster data structure (see col.27, claim 1). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to employ the teachings of Zhang within the system of Slaughter by implementing a cluster data structure within the cluster configuration management method, system, and program because Zhang teaches that such implementation maximizes efficiency and accuracy (see Zhang: col.5, lines 11-14) and Slaughter teaches that he "desires...fast and efficient queries" (see Slaughter: col.2, lines 19-25).

As per claims 25, 48, and 72, Slaughter further teaches wherein said cluster data structure comprises a unique cluster identifier for the cluster (see abstract).

***Response to Arguments***

5. In response to the argument regarding the reference cited, Slaughter clearly teaches the elements claimed. New reference locations have been provided. The

examiner concurs that Slaughter is concerned with providing a consistent configuration database as is the claimed invention, and further conclude that there is nothing in the claims functionally distinguishing it over prior art.

Furthermore, in response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., "global configuration **database** or **repository**") are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

The applicant's representative can argue repeatedly about the distinction of comparing "local configuration data" and "global configuration data", but unless there is stated in the claim the functional novelty that teaches away from prior art, a patent will not be issued. Clearly, Slaughter teaches the element of "performing a comparison between local configuration data and global configuration data" (see col.5, lines 24-27 and col.12, lines 30-32). In order for data to be synchronized to achieve consistency, in a cluster configuration database, it is implicit that at least two databases must be compared (i.e., internal (local) and external (global)).

Additionally, one of ordinary skill in the art would agree that **within a cluster**, when Slaughter teaches that each node comprises a database and a global consistency is checked (see col.5, lines 30-34), the other node that which also comprises a database, would could be considered a global database in a distributed environment.

By amending the claims to include "management", "control", and "configuration" does not further limit the claimed invention because the functions related to the words listed above are inherent. The applicant's representative is encouraged to amend the claims with respect to the element he has been consistently arguing, which is the element of comparing "between local configuration data and global configuration data".

***Conclusion***

6. Claims 1, 2, 7, 9-30, 32-54, and 56-74 remain rejected

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Young N Won whose telephone number is 703-605-4241. The examiner can normally be reached on M-Th: 6AM-3PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hosain T Alam can be reached on 703-308-6662. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Young N Won

March 23, 2004

HOSAIN ALAM
SUPERVISORY PATENT EXAMINER